

REMARKS

Claim 6 has been amended. Claims 11-13 have been added. Claim 8 has been canceled. Thus, claims 6, 7, 9 and 11-13 are pending in this application.

Objection to the drawings:

The Examiner objected to the drawings because the drawings do not show the direct drive. The specification describes the first motor as a direct drive motor. The drawing shows this with motor EM directly driving the spindle SP through spindle nut SM without the use of a gear. Former claim used therefore the term direct drive to indicate the type of drive used for the first motor. Applicant amended claim 6 to more clearly indicate this relationship.

The Examiner further objected to the drawings for introducing new matter with the element "back stop." Applicant hereby requests to reinstate the original submitted drawing to overcome this objection. Furthermore, claim 8 has been canceled.

The feature of blocking can be provided by the gear mechanism itself. The gear mechanism is shown schematically as pulleys RS1, RS2, and belt R. Thus all necessary elements are shown in the original drawing.

Claim rejection under 35 USC §112:

The Examiner objected to the former claims 6-9 for introducing subject matter that has not been described in the original description. With respect to the term back stop, Applicant canceled former claim 8. Independent claim 1 does not include this limitation.

With respect to the term "direct drive", Applicant amended claim 1 as stated above with respect to the drawing objections.

With respect to claim 7, Applicant respectfully disagrees with the Examiner as to how the gear mechanism can be blocked. The present application discloses an injection unit with a first motor that drives a screw through spindle nut which engages with a spindle. See specification page 3, paragraph [0011]. The second motor drives the spindle through a gear mechanism. See specification page 4, paragraph [0014]. Thus, the revolving movement of the spindle depends on the superimposed motion created by the two motors. Different types of motion can be created

by this arrangement. Generally, the first motor is used to produce a high speed lateral movement of the screw for injection of the material within the screw cylinder. The second motor, on the other hand, creates a high torque motion for preparing material.

Lateral movement is created with the spindle and the spindle nut having different rotation speeds. For example, the mixing and preparation process can be done with a turning screw/spindle with little or no lateral movement of the screw. To this end, the first motor which is the only motor that drives the spindle nut, can create a compensation movement of the spindle nut to control lateral movement. If the rotation of the spindle nut is controlled to be the same as the spindle, no lateral movement will take place.

However, during the injection phase, the spindle is required to move lateral in a fast fashion to produce high injection pressure. This can be accomplished by blocking the spindle from turning. The easiest way to do this and at the same time relieve the second motor from any operation is by blocking the gear mechanism. This simply means that the gear mechanism is not able to rotate in any direction. When the first motor then drives the spindle nut, the spindle will "turn into or out of" the nut and create the required lateral movement. See specification page 4, paragraph [0015].

A person skilled in the art of these types of injection drives will understand from the description, in particular, from the arrangement of the two motors and the fact that the first motor drives the spindle nut directly and the second motor drives the spindle through a gear mechanism, what kind of a gear mechanism can be used to accomplish this. Such a gear mechanism must simply have any type of blocking mechanism that stops the spindle from rotation. A mechanical engineer skilled in the art of gear mechanism will not need to experiment unduly to accomplish this. Furthermore, many different types of gear mechanism are available which can accomplish such a requirement.

Applicant added new claims 11-13 which reformulate this arrangement. No new matter has been added to these claims. Applicant therefore believes that these claims are also allowable and that the present application comprises a specification that will enable someone skilled in the art to construct an injection unit according to the present invention. Therefore, Applicant respectfully requests allowance of the present set of claims.

CONCLUSION

The application as defined in the pending claims is patentable under 35 U.S.C. §102 and §103 in view of the cited prior art. Therefore, applicants respectfully request withdrawal of the rejection and allowance of all pending claims.

Applicants do not believe that any other fees are due at this time; however, should any fees under 37 C.F.R. §§ 1.16 to 1.21 be required for any reason relating to this document, the Commissioner is authorized to deduct the fees from Deposit Account No. 02-0383, (*formerly Baker & Botts, L.L.P.*,) Order Number 071308.0218.

Date: January 23, 2004

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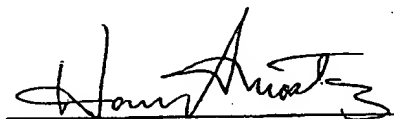
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